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JANUARY
1953

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NATIONAL AGRICULTURAL COLLEGE

Farm School, Bucks County, Pennsylvania

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Editorial

The Farmer . . . What Is His Future?

By Joseph L. Chernicoff '53

Now that the excitement of the election is over, and the people have elected their new president, what lies ahead of the farmers? What effect will the end of war contracts and other defense programs have on the farmer's economy? What will be the effect of the new parity system of president-elect Dwight D. Eisenhower? These are but a few of the many problems that face the farmers of today.

It is a well established fact that farmers receive better prices for their products in times of full employment and in inflationary periods. It is the consensus of many economists that with the ending of the many armament contracts in the middle of 1953, there will be a slight period of unemployment, and with it, a slight recession.

It is also predicted that business men, in general, will have a good year, and that the consumer will enjoy a period of lower prices. This can already be seen by the lower prices of meat, etc. This trend will continue until 1954, when the country, after Mr. Eisenhower becomes acclimated to his job, should go through a period of adjustment.

Now, what is going to happen to the farmers of this country? Along with periods of lower prices for agricultural commodities, how will the farmer be able to adjust his operational costs and living costs to meet this new challenge?

The continuation of parities will undoubtedly be a big help to the farmer. But parities the farmer receives are based upon his crop and not the need of his family. In other words, it is crop subsidation and not farmer subsidation.

How will the farmer be able to continue living as he has in the past few years? With his decreased receipts, the farmer will not be able to keep up the standard of living that he has enjoyed in the past. Is it fair for the farmer, who is certainly one of the most important producers in the world, not to enjoy a high living standard, the same as his industrialized neighbors?

With lower receipts, the farmer will not be able to purchase as many of the "luxuries" of life that nowadays seem so essential. Farming, aside from being a way of life, is essentially a big business, though a special type of big business because of the production methods used. How is the farmer going to be able to keep up his standard of living?

Better production methods, better management practices — all that comes under the heading of real, practical farming is the answer. The farmer, by practicing a strict economical farming, will not suffer too much.

The farmer is not going to be in the throes of a "black year," but the idea that he is going to be more affected by the economy of the nation is important. It may be difficult for him to feed the country when he is not doing as well as the person being fed.

The following few paragraphs are quotes from Dwight Eisenhower regarding agriculture:

"I support the letter and spirit of farm legislation now on the books . . . to give agriculture basic protection against economic disaster."

" . . . we can improve . . . . on economic support programs now in effect on perishables. The new Republican administration will ask producers of perishables to work with us in shaping programs that provide adequate protection . . . "

"I believe . . . in conservation of natural resources . . . we will work toward a single soil conservation program, administered with a maximum of local control."

"The Republican administration will . . . with the cooperation of the farm people themselves, . . . encourage and maintain the farm family."

". . . we must continue to gear our . . . research and education system to the needs of the family farm, . . . and expand their cooperatives and their farm credit system."

These are but a few of the thoughts of Mr. Eisenhower, and they were stated before the election. Now that he is to be in office, let us hope that the Republican administration will give the farmer something to look forward to in the coming years.

Art Editor of GLEANER Receives Command

From the Doylestown Intelligencer, Nov. 14th—"With the transfer of Captain Robert L. Warnick, of Germantown (Philadelphia), to a battalion headquarters, Company D, 111th Infantry Regimental Combat Team, Pennsylvania National Guard, Doylestown, has a new commanding officer."

* * *

This new C.O. is the Gleaner's own Robert D. McKenney. Bob has been on the Gleaner staff for the past three years, and has been Art Editor since April, 1952. He is a senior Poultry Husbandry major and has been a member of both the Eastern Intercollegiate Poultry Judging Team and the National Judging Team. His art work is a familiar sight to all of those who are connected with this college and, of course, to all readers of the Gleaner.

At the time of this writing, Bob was a Lieutenant, but he was expecting his official captaincy within a very short time.

Bob has been connected with the Army since 1941, at which time he was at Pearl Harbor at the time of the Japanese attack. He was serving as an enlisted man at Schofield Barracks, Oahu, which is adjacent to Wheeler Field which was also bombed.

Lieutenant McKenney has served with the National Guard since June, 1949.

Bob has just purchased, along with a friend, a new poultry farm, on which he plans to raise Leghorns.

He is married and has two children.

ONE MAN'S OPINION

By Ed Vansant '53

When Dwight D. Eisenhower was elected to the presidency, probably one statement more than any played in the minds of his voters. This dealt with Eisenhower's promise to go to Korea after he was elected, and in the minds of many was the skepticism of whether or not this was just an idle campaign promise.

Then, one week, not to long ago, the people of the world heard the announcement that President-Elect Eisenhower was on his way home from Korea. They were then satisfied with their faith in the man.

The visit to the battlefronts was undoubtedly a big boost to the morale of the soldiers, and Eisenhower, having a great amount of military knowledge, probably, with the assistance of his aids, was able to get a good picture of what is going on.

Of course, many people will say, "What can any man do in three days?"

As mentioned before, this trip was a great boost to the morale of the men of the Armed Forces, and, I think, to the morale of Mr. and Mrs. John Citizen, U. S. A.

EISENHOWER'S FARM POLICY

MARVIN ADLEMAN '55

Farm policy, in the words of our recently elected president, "focuses on the question of farm income." In the past, the labor of the farmer has remained the same, but his income has risen or fallen according to the unpredictable fluctuations of the market. Eisenhower's farm policy is aimed at having full parity prices for all farm products in the market place. His program includes commodity loans on nonperishable products, "on the farm" storage, sufficient farm credit and voluntary self-supporting crop insurance.

Where government action on perishable commodities is desirable, President-Elect Eisenhower recommends locally controlled marketing agreements and other voluntary methods. The program includes commodity loans on all nonperishable products supported at the level necessary to maintain a balanced production.

Eisenhower favors having a bipartisan federal agricultural commission with power to review the policies and administration of farm programs and to make recommendations.

He supports a constructive and expanded soil conservation program administered through locally controlled local districts which shall emphasize that payments be made for practice and improvements of a permanent nature.

The Republican Party has declared intentions of creating farm prosperity and stability, safeguarding the farmer's independence and opening opportunities for young people in rural communities.

Editorial

The New Business Administrator

Mr. Daniel Miller

Shortly after the beginning of the Fall semester, Mr. Daniel Miller became the Business Administrator for the National Agricultural College.

Mr. Miller was formerly the Assistant Dean of Students, and he is replacing Mr. William A. Smith, who resigned at the end of the summer.

Mr. Miller is, as many of us know, very familiar with the college, having been connected with it since Farm School days.

Besides acting as Business Administrator, Mr. Miller is one of the Advisors of the GLEANER.

ALUMNI LANE PARTIALLY REPAVED

To most of us in the know, the repaving of Alumni Lane is old news, but for those of you who missed this occasion, we present documentary proof with the above picture. For further evidence, come and visit our campus when you get the chance.

HOW LONG WILL THERE BE FARMS IN BUCKS CO.?

By E. S. Reinthaler

We all know that, in common with every other kind of economic factor, land tends to be used for that purpose for which it best is fitted. It might be possible to raise cotton, under glass, in Connecticut, but this is not done, since the crop can more economically be grown outdoors in Alabama. Land in Manhattan might be very good for farming, but it will not be farmed because its value for city uses is far above its highest possible value as farm land.

For centuries Bucks County has been a farming district. Its climate and soil have qualified its land for such use, and its population has, as a result, been composed of families of farmers who have established a tradition of efficient agriculture. For the past century this tendency has been encouraged by the growth of Philadelphia to the South, which has produced a ready market for the agricultural production of the County. As a result there has been a steady increase in dairy, poultry, and truck farming, enterprises which prosper in situations which are near enough to a large city for it to provide a market for their produce.

With the growth of Philadelphia and New York, and the improvement of transportation, Bucks County is now becoming suburban in character. There are few portions of the County which are now more than a hour's ride, over good roads, from Philadelphia. The development of the New Jersey Turnpike and the improvement of other roads has now placed the County on the fringes of the New York commuting zone, and there are many New York commuters who reside in Bucks County. There is good train commutation from Trenton and Flemington, and somewhat slower commutation from Reading Co. stations. By car most portions of the County are now less than two hours from the heart of New York.

The result is that increasing amounts of Bucks County land are devoted to residential use. At first this takes the form of conversion of farmland to gentleman-farmer's uses, with the productive fields either cultivated by hired labor, or rented to neighboring farmers. The gentleman-farmer, to a greater extent than the operating farmer, has a mind to the speculative possibilities of his farm, and such farms are often subdivided into building lots before operative farms would be, in the same location.

As soon as farms are subdivided into building lots, problems arise as to water supply, sewerage, access streets, and garbage disposal, as there are so many more family units to the acre. Larger and better schools are demanded, and more elaborate police and fire protection becomes necessary. The result, of course, is higher real-state taxes. Such high taxes make it difficult for professional farmers to meet the costs of farmers who operate in a locality which is still predominately rural, and since the condition is usually accompanied by higher land values, the result is that the farmers sell their land for subdivision, and move their operations to localities which are further from cities.

It is this type of evolution which is now occurring in Bucks County. Residential districts are supplanting farms which have been operated for centuries. Local zoning and sanitary codes, which such conditions make necessary, but which are inconvenient and perhaps unnecessary in a purely agricultural community, are being adopted. Real estate taxes are rising. Soon it will be as uneconomical to farm in Bucks County as it is to farm in Westchester County, N. Y., which adjoins New York City.

All of this, of course, will not take place at once. There will be much farming in Bucks County for many years, just as there are still many farms hidden away on side roads in Westchester County. This condition sometimes makes it possible for a progressive individual who wishes to buy a farm to do so in a location such as Bucks County, and to enjoy speculative possibilities with respect to real estate values at no additional cost.

SOMETHING FOR YOU

IN this case, YOU stands for the Alumni. I have received many letters regarding the Gleaner, and most of them had to deal with news about alumni.

The complaints state that either the alumni news concerns only the old alumni or the new alumni, without a "happy medium."

In one letter that I recently received, a seemingly disgruntled reader said that there should be articles from alumni who have made a success of themselves in business, and that such articles would be of interest to all concerned.

I don't know how many times this gentleman has read the Gleaner, but if he has read it at all, he must surely have read the plea for letters, articles, and pictures of the alumni at their chosen profession.

I hope that there are many of you alumni who feel the same as this reader, and wish to read about your old classmates, or even about yourselves. Four hundred and fifty words are sufficient, and I can guarantee that all articles will be well received.

One article in this issue that should be of utmost interest to all Farm School alumni is Farm School, 1900, found on the following page. If any reader knows the identification of any of the players in the accompanying picture, we would be very happy to hear from him.

We are also happy to see so many of the alumni subscribing to the Gleaner, and we wish that you would tell your friends to do so too.

J. L. Chernicoff

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FARM SCHOOL 1900

Fourth in a Series of Historical Articles

By Marvin Adleman '55

The National Farm School was opened in 1897 for the purpose of affording young men an opportunity to study practical and scientific agriculture for agricultural careers. The farm at this time consisted of 122 acres of tillable land and several acres of timber. The school itself was essentially contained in one building called "Pioneer Hall" which was situated in the location of our present library.

This wood-frame building housed the school's 34 students on the second and attic floors; on the first floor were the mess hall, a study room and a single class room in which all academic classes were held and which contained a small library of books. There were a row of sinks and a single shower located in the basement and lines were always long after a hard afternoon of cutting down trees, digging wells, or working the fields.

The faculty consisted of five instructors, including the dean, each of whom taught six or more subjects.

Rules enforced during this period were as severe as Army rules and just as strictly adhered to. The following is quoted from an early Farm School catalog:

"Before any student shall be admitted, his parents or guardian must release all control over him from the time of his entrance until his completion of the four years' course, or until such prior time as he may, in the discretion of the board be discharged therefrom. Such parents or guardian must also waive all claim for compensation for services which he may render in or about the school or the farm thereunto belonging."

"House Rules"

"All visitors to be out of the buildings and off the grounds at six o'clock P.M."

"No lady to be taken in the dormitories."

"No gambling of any sort whatever allowed at National Farm School."

"Permission to leave the grounds, to use the piano, or to practice singing must be obtained from the governor."

Every morning at 5:30 A.M. a loud bell that could be heard in every nook and corner of "Pioneer Hall" was sounded after which the boys had fifteen minutes to wash, dress, and be out to attend to their assigned details. Breakfast was at 6:30 and at 7:00 there was an inspection of rooms. At 7:15 a military drill period was begun that lasted until 8:45. At which time a chapel service was held. From nine to twelve, academic classes were in session. During the afternoon the students were engaged in practical field work, at five o'clock details, six o'clock supper, seven to nine study period, and at 9:45 the gas lights had to be out and the boys in bed.

All students at N. F. S. were actively interested in sports and in 1898 they organized an athletic association. Not having the proper number of students to make athletics a feature, they contented themselves in indulging in the three major sports (football, baseball, and handball) whenever time allowed, not making themselves conspicuous to other schools.

Football, nevertheless, became the game of the school. The first year they played among themselves. The boys then acquired a spirit which has lasted these 54 years since. In '98 the team made a courageous attempt in playing their first game of football with the Doylestown High School. They entered the game with all the enthusiasm which could be summoned by a lover of sport. The game was hard fought but they were defeated 15 to 5 by the experienced Doylestown squad.

Through the years boys have come and graduated, ball games have been lost and won, but Farm School has progressed steadily—building, winning, always striving to become one of the world's leading agricultural colleges.

The Champs of '99

THE STORY OF PHEASANTS

By Lewis Scharnoski '53

RINGNECK PHEASANT COCK

Pheasants are natives to Asia, but several species have been introduced to England and the United States. The most common pheasant in the United States is the ringneck, which was first imported into Oregon from China.

The true cock pheasant does not have a white ring around his neck, but through breeding of the Chinese and Mongolian species, and then crossing them with the Japanese species, the ring-neck pheasant, which in reality is a hybrid, was produced.

The ring-neck pheasant *Phasianus Torquatus,* varies in the length of its tail feathers which may reach three and a quarter feet. The adult male's head and neck are dark blue with a reflection of other shades and a white ring around the neck. The back colors range from orange brown to a dark red-blue; the breast is chestnut with a tinge of edging of a greenish-gloss. The tail is olive-brown with red-purple edging, crossed with black bars. The bare skin on the head is scarlet. The female has a shorter tail, and the general plumage is brown, marked with a black color, making the male more attractive than the female.

After the Second World War, many new hunters have been interested in shooting game birds in public fields, as well as in paid shooting preserves. This, no doubt, has prompted the tremendous increase in the propagation of the ring-neck pheasant. We must also stress the importance of the pheasant as food. Thousands of "city folk" as well as farmers, consume a large quantity of this bird.

The rearing of game birds has approximately paralleled the poultry industry in new developments. Under these conditions, sound scientific breeding, feeding and housing programs should be followed, and the older methods of rearing should be disregarded.

If you wish to become a breeder, you must buy breeding stock. The type of birds to buy are the early maturing hens, in prime condition, well feathered, and of good body type. Be sure to buy your stock from a reliable breeder who practices strict selection.

The males that you wish to use as breeders should be selected in November. They must be vigorous, large, and with good body type and color.

Female breeders should be selected in September or October, and only the outstanding birds should be kept for breeding; the other birds should be sold. In selecting early maturing birds we tend to increase egg production; thus, production begins earlier in the season. We will have fewer culls, larger eggs, and more vigorous chicks.

Pheasants usually begin laying during April, but in the southern regions of the United States they come into production a little earlier. Artificial lights are used to stimulate egg production. A 40 or 50 watt bulb used in each room gives a 13-hour day. The lights should be on at least a month before egg production is anticipated.

The males should also be placed with the females at least one month before egg production begins, insuring production of fertile eggs. Results have proved that two-year-old hens are the best for breeders, but one-year-old pheasants are satisfactory. For best results, the cocks used should be only one year of age.

When placing the males and females on range, be sure to clip the pinion or secondary feathers to prevent flight. The fence on the range should be six to ten feet in height. When placing the males and females together you should use one male to six to ten females. The flock may run together, but better results are obtained if you limit the flock size into sections; twenty-five females to three cocks in each pen has been found satisfactory. When you practice flock breeding you may have trouble with cannibalism in the cock birds. If this problem occurs, you must separate the males and the females in small lots.

The hen pheasant lays up to sixty eggs. The hens tend to lay their eggs near the outer perimeter of the fence, to overcome this situation you should have evergreen trees twenty feet from the fence and corners, because most of the broken eggs are found near the wire fence. The trees draw the birds away from the fence, and they lay their eggs near the trees.

During the winter the breeders should have the best of care. They should be kept in comfortable pens. A comfortable pen is a pen that is sheltered from the northern wind with a shed which provides a dry area during winter rains. I have seen pens with no wind break or shelter which were satisfactory, but a little shelter would have been better. On the range, feed and water should be kept in front of the birds at all times. I suggest that one should follow his feed dealer's recommendations for feeding his stock.

When the weather is freezing, eggs should be collected every half hour, or at least four times a day. Frequent collections reduce the possibility of broken eggs and eggs that are spoiled by the sun's heat if they are exposed to it for any length of time. The eggs should be stored in a cellar with a temperature of 50 to 60 degrees, with the relative humidity from 60 to 70%. Sprinkling water on the floor will tend to raise the humidity.

When selecting eggs for the incubator, you should eliminate all cracked, thin shelled, very small or large eggs and remove all those which are poorly shaped. Some of the cracks can be repaired by placing Scotch cellophane tape over them.

One cannot expect good eggs from hens that are infected with a respiratory disease. If this situation arises, don't set these eggs. After collections you should not keep hatching eggs longer than ten days because fertility and hatchability will drop.

Choose Your Incubators

The choice of incubator to use for hatching pheasants differs from the type used by poultry breeders. There are many types of incubators that can be used successfully: the all electric, which works well for the small breeder, or the cabinet type machine which will be of value to the large breeder.

Incubation experience has been that pheasant eggs will not hatch as well in a cabinet incubator as they will in the deck type with gravity air circulation or so called "still air." Therefore, incubation is done in the cabinet machine for the sake of saving space; then the eggs are removed to a still air machine for hatching.

Again I would like to stress that when buying equipment you should consult a breeder using the type of machine you wish to purchase.

When using the still air machines a temperature of 102.5° F. should be maintained for the first fifteen days and lowered to 101.5° F. for the remainder of the incubation period. The humidity should be kept at 70% during the first fifteen days and at 60% during the latter part of the incubation period. If the air agitated incubator is used, a temperature of 99.5° F. should be kept throughout the incubation period, and the relative humidity should be held at 65%. When the eggs are pipped they should be sprinkled with hot water. To insure good hatchability, turn the eggs four times a day. Disease prevention should be practiced in the incubator room. Have a clean room with a temperature of 70°. The incubators should be disinfected after each batch.

Junior Barn Dance Big Success

PART OF THE CROWD ENJOYING ITSELF AT THE JUNIOR CLASS SQUARE DANCE

On Saturday, November 15, the Junior Class held a Barn Dance in the National Agricultural College gym. There was a huge turnout at the dance, and the crowd was treated to everything from apples-on-a-stick to a hayride.

There was a very large attendance of non-N.A.C. students at the dance, which shows that more and more people are becoming interested in the activities at the college.

This dance was a success in another way. N.A.C. won its final game by beating Wilson State Teachers College, 25-6, thus completing a successful football season.

Dance Chairman was Al Rosner, and Victor Ransom was Chairman of the Decorations Committee.

GROWING SWEET POTATO

By John Soards '54

Sweet potatoes, until only a few years ago, have been considered a southern states crop. This was due to the general usage of the crop in that area, but labor costs, storage, and marketing conditions were a big factor. With the advent of mechanical farming methods, planting and cultivation of sweet potatoes on large acreage was made possible.

When hand planting of sprouts or vine cuttings was the only planting method used too much labor was required. Their market price made it a very questionable business venture for the farmer of the more northern farming areas, even when climate and soil were adaptable to their growth.

With the advent of the mechanical transplanter it became possible to plant larger acreages at the proper planting time, and at a cost so reduced that the sweet potato became a profitable crop.

While in some southern areas sweet potatoes are the the main vegetable supplementing the white potato, they have never had the demand of white potatoes, although consumption has increased many hundred fold in the past twenty-five years.

Along with mechanical transplanting, other general improvements in mechanical farming, lower cost and better storage facilities, cheaper, faster, and better transportation facilities have played an important part in increasing the use and demand for sweet potatoes in the more northern sections of the country.

Raising sweet potatoes requires some specialized equipment, rather large hot beds for plant propagation, and these are somewhat of an extra investment for the general farm—hence they are more or less restricted to areas where climate and soil are right.

The production of sweet potatoes requires the planting of selected seed in hot beds in the early spring so that they produce sprouts, or plants, at the approximate rate of three thousand plants per bushel of seed. It requires about eight to nine thousand plants per acre, with rows spaced at forty inches and plants sixteen to eighteen inches in the row.

These plants are pulled from the hot bed when about six to eight inches high and are tough and sturdy enough to transplant. They are then planted in ridged rows with transplanting machines; with usually a liquid fertilizer or transplanting solution to start immediate growth. The sweet potato is a very hardy plant and transplants under ordinary growing conditions easily.

Sweet potatoes require careful and frequent cultivation, and will not survive and produce unless kept free and clean of weeds and grass. They require less nitrogen, but rather high phosphate, and high potash fertilizer—usually a 3 - 9 - 12 mixture.

A PH of approximately five to six is needed. Some growers in the past considered a PH of three point five to four point five the best, but recent years have shown that at a higher PH bigger and better yields have been produced.

Digging is done almost the same as for white potatoes, but the chain on the digger is usually modified to prevent bruising. Great care must be exercised in handling sweet potatoes to prevent bruising or scarring, otherwise they will not keep well.

Sweet potatoes, unlike most other root crops, must be cured at high temperatures. A temperature of 85° F. must be maintained for a period of a week or two, with proper humidity control necessary. After the curing period, temperatures of about 60° F. are maintained in the storage house until the sweet potatoes are used or marketed.

John Soards looking over some sweet potatoes on his farm. The picture is dark because of the smoke from forest fires in the area.

Up until the last five years, the only marketable sweet potatoes were the table size, or U. S. No. 1 and 2 as designated by the U. S. Department of Agriculture. But now sweet potatoes that are one and one half to two and one half inches in diameter are gathered and canned and are feeding a ready market. This market has developed to such an extent that the net price per bushel for the canning house size is often higher than that of the U. S. No. 1 grade, with the canning house grades averaging about half the yield per acre.

Some farmers are experimenting to produce a higher yield of canning house potatoes, believing that the market will diminish for the U. S. No. 1 and increase for the canning house size.

Unlike white potatoes, sweet potatoes must be marketed in containers that will protect them from excessive bruising; and while, at the present time, most white potatoes are carefully graded and washed, there are a great many white potatoes sold as field run, and sacked at storage points just as they came from the field. But careful washing, grading and packing is a *must* for all sweet potatoes, with most packing plants waxing and heat trying.

At the present time sweet potatoes are marketed in half and whole bushel baskets, usually called tub bushels, and are transported to markets in fast express trucks.

The Story of
CANNED MILK

By Kurt J. Sonneborn '55

The milk of goats, horses and camels has been used by men for thousands of years, but the cow more than any other milk supplying animal has captured man's imagination as the most plentiful supplier of this most perfect of foods.

In early antiquity man, always subjected to the whims of nature, found that the cow even in periods of drought and famine would give him and his family a life-maintaining liquid as long as some sun scorched weeds were found for his cows to graze on. Little wonder that mankind saw in the bull and cow a creation of divine origin to be revered.

The early Egyptians made beautiful statues of bulls in their temples to which they offered incense and prayers: how widespread and basic that belief must have been in the ancient world can be seen by the fact that the Israelites, who had broken with the belief in a visible god, reverted occasionally to praying and dancing around the golden calf, as related in the Old Testament.

As civilization advanced and man learned to preserve meat and other foods it must have occurred to him that milk, which spoiled easier than any other food, would need a preservative to be stored in times of plenty for times of need. This led to the production of cheese and butter, but whole milk as supplied by the cow could not be stored longer than a few days, and in warm climates not longer than a few hours without serious damage to its texture and body.

Napoleon, who coined the phrase, "An army moves on its stomach," had, like any general before and after him, to deal with the problem of supplying his armies with food. The French government, at his initiative, offered 12,000 francs to anyone who would find a satisfactory method for preserving food.

Nicholas Appert in 1810, after 15 years of experimenting, announced that he could preserve food by first heating and then sealing it in an air-tight container.

This was the beginning of the science of food technology, for which he was given the prize of 12,000 francs. And Appert is known today as the father of the canning industry. His method was especially successful with fruits and vegetables. He even made attempts to preserve milk by evaporating it to one-third of its original bulk, but he was unable to heat treat milk and obtain a product that tasted like raw whole milk.

To Nicholas Appert belongs the credit for a great discovery, yet strange as it seems he had no idea why food heated and sealed in air-tight containers would not spoil. The French government again offered a prize to anyone who could find the answer. The famous French chemist, Guy-Lussac, came up with the remarkable conclusions (for those days) that canned food remained wholesome because air was kept from it.

Yet this was not the whole truth; another French genius named Pasteur proved to the world the existence of micro-organisms and their effect. Pasteur demonstrated that food sufficiently heated to destroy bacteria, yeasts, and molds, and which is then kept in containers from which air has been excluded, will keep indefinitely. This is done not only to exclude air as Guy Lussac believed, but particularly to keep out particles of dust and moisture, the carriers of micro-organisms.

In the United States the first evaporated milk product was prepared in the little town of Highland, Illinois, in 1885. Like frozen food in World War II, evaporated milk in the Spanish-American War rose from obscurity to fame for a food prepared to keep indefinitely, which could be transported easily and would maintain the health of soldiers and civilians alike.

More than a hundred years after the death of Appert, the world went to war again in 1914 and 1939, but now the armies had milk in camps and even in the trenches. Millions of cases of evaporated milk went from America to feed the civilian population of Europe and the allied armies in the field. Today evaporated milk is an integral part of our daily diet.

Our ability to accomplish the preservation of milk is due to the fact that we are able to evaporate milk quickly and at low temperature. This is done through the "vacuum pan" process. The vacuum pan is a kettle so enclosed that all, or nearly all, the air can be pumped out, thereby producing a vacuum. With the air pressure removed from the surface of the milk it will boil vigorously and the water will evaporate rapidly at about 130° F. instead of at 212° F. This process not only prevents the scorching and coagulating of milk, but scientists have discovered that food containing vitamins can be heated for a long time without destroying the vitamin content, provided the air is kept away.

However, we are getting ahead of our story; let us therefore go back to where the milk comes into the plant, and see what is going on there.

The milk comes into the plant where it is observed for odor and appearance. It is then pumped directly into the holding tanks where it is kept cool until ready for evaporation. When the process begins the raw milk comes from the receiving tank and is run into fore-warmers where it is quickly heated to temperatures equal to that used for pasteurization. The milk then enters the evaporating pot where under vacuum the water of the milk is evaporated at a temperature of 130° F. The evaporating process is a continuous one and the rate of evaporation is the removal of 1.103 pounds of water from 2.000 pounds of milk. From the evaporator the milk is pumped to the homogenizer.

The process of homogenization consists of forcing the milk through extremely small openings. In order to make the milk go through it, a homogenizer must maintain a pressure of three pounds per square inch. The fat globules, which are chemical molecules of rather large size, are broken up in this process into numerous smaller ones of uniform size of one to two microns (one micron equal to 1 25,000 of an inch).

The two most important reasons advanced for the homogenization of milk are: that the forces tending to make the small fat globules rise to the surface are less than the forces needed to push them through the viscous milk, and they remain therefore evenly distributed

(continued on page 15)

PRE-INVASION

By C. Bornfriend '54

"Will you step this way, sir? General Washington will see you now."

I rose from my seat and walked briskly toward the door, my tricornered hat nearly splitting at the seams because of sudden head expansion. I was engulfed in vanity, not because I was going to see the General—I had spoken to him many times before—but because this man had called me, a newly promoted P.F.C., "Sir." I certainly was glad that new recruits were always coming in. I opened the door and proceeded to walk in, but as my chest grew out of proportion, filling my loose fitting jacket, the only word that ran through my mind was "Sir."

At the sound of the deep rasping voice I snapped back to reality. "Bornfriend," the General said, "as before, I am calling on you for help. Tomorrow is a big day, and I must present myself to my men as an inspiring leader. In the past you have always aided me in presenting that impression, and for this mission you must help me once again. I want you—, more than that, I demand that you serve in the same capacity as before and help me through this mission." I nodded.

I was always so overwhelmed in the presence of this mighty force that speech was difficult. Now, as I surveyed him standing there, I was impressed more than ever. Even in these bitter and hard days of war he was meticulously neat and clean. From the toes of his hand-tooled leather boots to the top of his powdered wig he was a picture of neatness. His trousers, tight around his muscular legs, were worn thin, but were creamy white nevertheless.

"Will you please post this notice on the bulletin board before we begin work?" he asked. Even in giving orders he was gentle and polite. Yet his force and vibrance were always felt. I took the neatly hand written parchment, and started toward the door, hurriedly scanning the document, once I heard the click of the latch behind me. It read:

"To: All Men this Command

Subject: Troop Movement

At 8:00 P.M., Dec. 25, 1776, All men in this command will fall out in front of the orderly room with full field packs and muskets ready to cross the Delaware. Class A uniforms and galoshes will be the uniform of the day.

By order of

(signed) General G. Washington"

I walked rapidly to the board and tacked up the notice. This was it—the move we had all been waiting for.

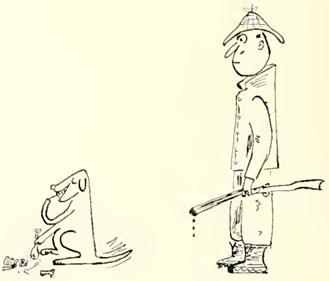
Hurrying back to the General's quarters, I was ready for the issue at hand. I noticed that George was seated on his high chair, the one he always used when we worked together. I knew he was ready too.

Carrying my case to where he sat, I opened it and proceeded to take out my equipment. I had been working busily for a full ten minutes when my leader spoke again, "You can't realize just what this means to me, Bornfriend. I don't know how I could have presented an inspiring figure to my men tomorrow without these well-shined boots." So saying, he heaved a contented sigh and once again my chest swelled.

I gave a final sweep with the brush, stood up, and eyed my work. It was almost perfection. I packed my case, and, wiping my hands carefully on my apron, I reached out for his warmly extended hand. Reeling, I walked for the door, my head high and eyes to the front. I was proud—proud to be doing my part to win this war of independence, the great American Revolution.

N. A. C. *Sportsman*

By Bob Feindt '56



The opening day of the hunting season was held up because of rain, which discouraged many of our own sportsmen here at the College.

Some counties in Western and Northern Pennsylvania were opened on the fifth of November, and the opening drew many hunters. Finally after eleven long days of waiting, Governor Fine opened the season throughout the state. Hunters from all walks of life went into the fields to try their skill against the cunning ways of Mother Nature.

On the whole, the first day's bag was an improvement over last year's opener and enough game remains in the covert to keep up the hunter's interests.

In Delaware and Chester Counties it was reported that just as many gunners were out as last year. In this area the pheasants were more plentiful than last year, but rabbits remained the same.

Lancaster County was overcrowded with both hunters and game, pheasants and rabbits accounting for the most part.

In this county many hunters ran a good chance of picking up a good dose of lead.

Many of our hunters that didn't engage in pre-season shooting were still rusty. A good example of this occurred in New Hope, Pa., when five outstanding sportsmen from National Agricultural College plus two outsiders missed a large Ringneck pheasant. Don't worry fellows, it's only the beginning of the season, I am sure many similar incidents happened throughout the state.

The main types of game hunted in this area are pheasants, rabbits, and squirrels. The latter are not as important to the experienced hunter, but provide interesting sport for the new sportsman.

For the hunters who haven't had a chance to go afield, they have much to look forward to. There is plenty of game remaining in the fields for their shooting pleasure, and many good days of hunting until the close of the season.

A poll taken of the N. A. C. sportsmen shows the following: nine pheasants, nine rabbits, seven squirrels, and one field mouse were killed on opening day.

(continued on page 15)

HIJACKED HUMOR

Compiled by PETE KRUSCH

Mose had been reading in the paper about all the propaganda, but it left him a little confused. He turned to his wife for help.

"Say, Mandy, what does this heah word 'propaganda' mean?"

"Well, Mose, it's dis way. By my first husband I had three children."

"Yeah."

"By my second husband I had five children."

"Yeah."

"By my third husband I had four children."

"Yeah."

"And by you I ain't had none, so that just proves that I'm the propah-goose, but you ain't the propah-gandah."

* * *

Two utterly dejected looking Aggies were draped over adjoining stools at the corner drug store soda fountain. After a long period of silence one turned to the other and snorted: "Helen's the most despicable, overbearing, sloppy hag I ever knew!"

"Yeh, I know," sympathized the other. "I can't get a date with her either."

* * *

"Mr. Keys," said the Junior as he prepared the budget, "should the light bill be placed under 'current expenses'?"

* * *

John R.: "Are you afraid of the big bad wolf?"

Girl: "No, why?"

John: "That's funny, the other three pigs were."

* * *

Our grandmothers believed that there was a destiny which shaped our ends, but the modern girls place more faith in girdles.

* * *

Chaplain: "My man, I will allow you five minutes of grace before the execution."

Condemned Man: "Fine, bring her in."—*Old Maid*

Love starts when she sinks in your arms and ends with her arms in the sink.

* * *

"Heard you were moving a piano, so I came over to help."

"Thanks, but I've already got it upstairs."

"All alone?"

"Nope, hitched the cat to it and drug it up."

"You mean your cat hauled that piano up two flights of stairs? How could a cat pull a heavy piano?"

"I used a whip."

* * *

Big Executive: "Boy, is this the right road to Columbus?"

Boy: "Don't know."

Big Executive: "How far is it to Loudenville,"

Boy: "Don't know."

Big Executive (becoming exasperated): "Boy, you don't know much, do you?"

Boy: "No, but I ain't lost."

* * *

Gladys: "All men react alike."

Aggie: "To your way of thinkin'?"

Gladys: "No, to my way of petting."
—*Mis-a-Slip*

"One pint of fluid and check the flint."
—Montana State College Farmer

Sweet young Co-ed: "I like men with blue eyes and green backs."

* * *

"There are four requisites of a good short story," explained the English teacher, "brevity, a reference to religion, association with royalty, and an illustration of modesty. Now I will give you thirty minutes to write a short story, remembering what I have told you."

After ten minutes Jim said he was finished and was told to read his story to the class. He read " 'My Gawd,' said the Countess, 'Take your hand off my knee'."—*Texas A. & M.*

* * *

"Is this the Salvation Army?"

"Yes."

"Do you save bad women?"

"Yes."

"Well save me a couple for Saturday night."— *Jack-O-Lantern*

* * *

A kindly clergyman, pinching little Johnny's knee: "And who has nice dimpled legs?"

Little Johnny replied: "Betty Grable."

* * *

"My boy friend is serving on an island in the Pacific."

"Which one?"

"Alcatraz."

* * *

Wisdom: Knowing what to do next.
Skill: Knowing how to do it.
Virtue: Not doing it.

* * *

Father—"Your new little brother has just arrived."

Little Boy — "Where'd he come from?"

Father—"From a far-away country."

Little Boy—"Another alien."

* * *

Soph: "Did you ever take chloroform?"

Frosh: "No, who teaches it?"—*Iowa Agriculturist*

THE CASE FOR DR. SCHATZ

As many of you know, an objection has been raised concerning the omission of Dr. Albert Schatz, the co-discoverer of streptomycin, from the Nobel Prize awards.

The following are the copies of notices released by Dr. Elmer S. Reinthaler, who represents the college, in the process of trying to have Dr. Schatz receive the honors he so justly deserves.—Editor

* * *

Professor Coran Liljestrand,
Secretary of the Nobel Committee for Medicine,
Caroline Institute,
University of Stockholm,
Stockholm, Sweden

Dear Professor Liljestrand:

It is with a sense of profound satisfaction that the Administration and Faculty of this College has heard of the award of the 1952 Nobel prize for the discovery of streptomycin. We are particularly gratified at this honor as the original discovery of streptomycin was jointly made by Dr. Selman A. Waksman and Dr. Albert Schatz, who is Professor of Micro-biology at this College. We note, however, with amazement that the award was made solely to Dr. Waksman, one of the co-discoverers.

We are certain that so distinguished a body as the Council of the Caroline Institute could not have been aware of, and yet have ignored, certain most pertinent facts regarding the discovery of streptomycin and the original co-discoverers thereof. For this reason we have caused an investigation to be made, and as a result thereof are convinced that further consideration by your Council would be well warranted. We respectfully submit herewith a summary of our findings pertaining to the discovery of streptomycin.

Inasmuch as the 1945 Nobel prize was awarded, in the most equitable manner, to Sir Alexander Fleming, Dr. Ernst Boris Chain and Sir Howard Walter Florey as the joint discoverers of penicillin, it is the opinion of the Administration and Faculty of this College that just recognition should be given to Albert Schatz, one of our colleagues, for his contribution to the discovery of streptomycin.

We sincerely trust that you will give consideration to this request and eagerly await your reply. We shall be pleased, upon request, to furnish you with documentary support of the factual statements contained in the enclosed summary. We enclose three copies of this letter and the supporting summary for your convenience in distribution to the members of your committee.

Respectfully,
NATIONAL AGRICULTURAL COLLEGE
Elmer S. Reinthaler, Ph.D.
Vice-President

SUPPORTING SUMMARY

The History of Actinomyces Griseus Cultures

(a) In 1916-19, Dr. Waksman isolated and studied a culture of *Actinomyces griseus.*

(b) In 1940-41, an examination of this culture yielded results which did not justify further work with this particular culture as a source of any antibiotic.

(c) In 1943-44, Dr. Schatz isolated not one but two new and independent cultures of *Actinomyces griseus* and found that each one of these produced streptomycin.

(d) In 1944-45, the 1916 culture of *Actinomyces griseus* was again examined and this time reported to produce no streptomycin.

(e) The antibiotic streptomycin was not known to exist before the work of Dr. Schatz in 1943-44.

Dr. Schatz's Doctoral Thesis

(a) Dr. Schatz's doctoral dissertation is entitled, *"Streptomycin — an Antibiotic Substance Produced by Actinomyces griseus.*

(b) This thesis reports experimental data on the isolation by Dr. Schatz in 1943-44 of the original two cultures of *Actinomyces griseus* which produce streptomycin, also on the characterization of streptomycin as a hitherto undescribed antibiotic, as well as on the inhibitive effect of streptomycin on tubercle bacilli *in vitro.*

(c) Dr. Waksman and Rutgers University accepted this dissertation as fulfilling the requirements of that institution for an original investigation of a problem in the major field of study before awarding the degree of Doctor of Philosophy, which was granted to Dr. Schatz in 1945.

Publication History of Streptomycin

(a) Dr. Schatz is the senior author of the first scientific publication announcing the discovery of streptomycin to the world.

(b) Dr. Schatz is the senior author of the first and now historically famous scientific publication (by Dr. Schatz and Dr. Waksman as the sole authors) which originally reported the inhibitive effect of streptomycin on tubercle bacilli *in vitro.*

(c) Dr. Schatz is a co-author of at least six other original and early publications on streptomycin.

History of the Patent Application

(a) In 1945 Dr. Waksman and Dr. Schatz applied as joint inventors for a United States patent on streptomycin.

(b) In connection with this application, there was recorded with the United States Patent Office an oath taken *jointly* by Dr. Waksman and Dr. Schatz to the effect that they verily believed themselves to be the *original, first,* and *joint* inventors (discoverers) of streptomycin.

(c) On September 21, 1948, the United States Patent Office issued Patent No .2,449,866 to Dr. Waksman and Dr. Schatz jointly.

(d) Subsequently patents were applied for in certain foreign countries jointly by Dr. Waksman and Dr. Schatz.

Later Developments

(a) On May 3, 1946 Dr. Waksman requested Dr. Schatz to join him in the assignment of their United States patent to the Rutgers Research and Endowment Foundation.

(b) Pursuant to such request, Dr. Schatz assigned his rights in the streptomycin patent to the Rutgers Research and Endowment Foundation.

(c) Dr. Waksman originally agreed with Dr. Schatz that neither of them would profit personally from proceeds which might be derived as a result of their joint discovery because streptomycin by its very nature was so vitally concerned with human health and even human life. Dr. Schatz was motivated by the fact that Sir Alexander Fleming, Dr. Ernst Boris Chain, and Sir Howard Walter Florey had not profited personally in this manner from their work on penicillin.

(d) Thus, without seeking compensation, Dr. Schatz complied with Dr.

Waksman's request and assigned his rights to the streptomycin patents to the Rutgers Research and Endowment Foundation on *that* understanding with Dr. Waksman that any and all royalties would be used exclusively for the benefit of mankind.

(e) At the time that Dr. Schatz executed patent assignments at the request of Dr. Waksman with the express understanding that neither would personally profit, he did not know that Dr. Waksman had an agreement to receive personally twenty percent of the net royalties derived from the streptomycin patents.

(f) When Dr. Schatz learned that Dr. Waksman was personally profiting from their joint patent, he requested Dr. Waksman and the Rutgers Research and Endowment Foundation to give him a detailed accounting of the royalties and an assurance that no individual, including Dr. Waksman, had personally received any of the royalties from the streptomycin patents. This accounting and assurance was never given.

(g) Dr. Schatz thereafter instituted litigation for an accounting against Dr. Waksman and the Rutgers Research and Endowment Foundation as Joint Defendants.

(h) During the pendency of this suit a settlement agreement was entered into between the parties whereby Dr. Schatz received a substantial amount of money and ". . . Dr. Waksman's other graduate students and his associates and assistants who participated in the antibiotic research which preceded the discovery of Streptomycin and contributed to its development thereafter . . ." also received financial distribution. It is of the utmost importance here to note from the very specific wording of this particular paragraph of the settlement agreement that all those "graduate students," "associates," and "assistants," who are listed by name, do *not* include Dr. Schatz and they were *not* acknowledged by Dr. Waksman to be co-discoverers of streptomycin. It is clearly stated that their work either preceded or followed the actual discovery of streptomycin!

(i) However, in referring to Dr. Schatz on this very agreement, it was stated that he "is entitled to credit legally and scientifically as co-discoverer, with Dr. Selman A. Waksman, of Streptomycin."

The following is the answer to the above letter:

KAROLINSKA INSTITUTETS
NOBELKOMMITTE
STOCKHOLM

Stockholm, Nov. 14, 1952

Doctor Elmer S. Reinthaler,
Vice President,
National Agricultural College,
Farm School,
Bucks County, Penna.

Dear Doctor Reinthaler,

Your letter of October 29, 1952, concerning the award of this year's Nobel prize in Physiology and Medicine has been duly received. It was immediately submitted to the members of the professorial staff of the Caroline Institute and was discussed at a faculty meeting yesterday. It was generally regretted that part of the information given in your letter had not been accessible to the members of the faculty, since it had not been published in any scientific journal. It may interest you to know that numerous American colleagues who have been invited to make proposals about the Nobel prize have suggested the name of Doctor Waksman, though none of them has proposed Doctor Schatz.

According to Par. 10 of the Code of Statutes of the Nobel Foundation, a copy of which is enclosed, "No protest shall lie against the award of an adjudicating body." For various reasons the faculty has no possibility of entering into detailed discussions about the prize awards and cannot reconsider the question of this year's Nobel prize.

With regard to the background of the paragraph just quoted we may perhaps refer to pp. 158-159 in the book "Nobel, the man and his prizes," Stockholm 1950. (An American edition has been published by the University of Oklahoma Press 1951.)

According to Par. 4 of the statutes "If two or more persons have together produced a work which is rewarded, the prize may be awarded to them jointly." Unfortunately there is an error in the English translation ("shall" instead of "may") in the copy enclosed. The correct wording is to be found in the book "Nobel, the man and his prizes," p. 584.

Sincerely yours,
H. BERGSTRAND
President of the Nobel Committee
G. LILJESTRAND
Secretary of the Nobel Committee

THE STORY OF CANNED MILK

(continued from page 11)

throughout the milk. The second reason for homogenizing milk is that when the fat globules are made so minute and evenly dispersed they are more readily acted upon by digestive juices.

The milk is now ready to be canned; this is done by an automatic machine which fills and then hermetically seals with a drop of solder over the small opening on the top of the can through which the milk has entered. The next step is sterilization. The most used but not the most modern method is the batch sterilizer. It is about the same as any autoclave you see in a doctor's office, but of course much larger. After the sterilizer has been loaded with cans, steam is introduced and maintained at a pressure and temperature sufficient for sterilization. When the cans have been labeled and are ready for distribution a representative number of cans are taken to the laboratory where they are checked for color, flavor, and viscosity. The cans are also given a final check by the laboratory technician for the proper amount of fat, total milk solids, and vitamins.

Evaporated milk is not the same in taste as whole milk. It is the only canned milk product which compares harmlessly with whole milk when diluted in water, since nothing has been added to it to prolong its keeping quality. Yet we all know that once returned to its original amount, evaporated milk does not taste like whole milk even if directions have been followed very closely. Work which has been done lately on the canning of whole raw milk is yet in its infancy, but once perfected it is certain to open another branch of the ever-expanding dairy industry.

△

N. A. C. SPORTSMAN

(continued from page 12)

HUNTING FACTS

1. For a rifle to be considered a carbine it must have a barrel measuring twenty inches or less in length.

2. In England the grey squirrel is looked upon as a varmint. It is said to have exterminated the native red squirrel.

3. Trapping is not permitted for nonresidents of Canaca in the Yukon Territory.

4. ALWAYS ABIDE BY THE TEN COMMANDMENTS OF SAFETY . . .

THE STUDENT COURT

By James Orem '55

The Student Court organization showing defendant, judge, prosecutor, and jury.

The Student Court is an organ of the Student Council composed of members chosen by the student body to maintain the quality of citizenship on our college campus.

The organization of the court is both simple and complete. It has a prosecutor, jury, defendant, recorder, and judge, the same as any other court.

Prosecutor — The prosecutor must be a senior council member who is appointed by the president of the court for the full year. If the prosecutor does not bring cases to court at least one month after the case has been reported, the council may recommend the appointment of a new prosecutor. It is the prosecutor's job to present the case against the defendant to the judge and jury. The prosecutor must have the complaint in writing and produce and submit the complaint to the judge. He may also question the defendant during the trial.

Jury—The chairman of the jury is appointed by the president of the court for the entire year. The chairman's duty is to conduct the jury while in session. He must present the jury's verdict in writing to the judge.

A vote is used to decide the guilt or innocence of the defendant. This vote must be carried by two thirds. The vote as to the punishment of the defendant must be at least two thirds of the jury. The jury consists of all members of the student council except the prosecutor, judge, and court recorder, but if a member of the student council is a witness for the defendant, he is not to be allowed to sit or vote with the jury.

Defendant—The defendant must be present at the court trial. He is notified as to the date, time, and place by the prosecutor in writing. Exceptions in the case are unavoidable absences. The reason for absences must be submitted, before the court meets, to the prosecutor. The defendant is always allowed to plead his own case except if he has a language difficulty. While the jury and judge meet, the defendant is allowed to leave the room. If he is found guilty he is required to carry out the penalty placed on him by the court.

Recorder—The Student Council secretary acts as the court recorder, but he can not be on the jury.

Judge — There are four revolving judges, each of which is a senior. These judges revolve for each meeting of the court. The judge reviews all court cases. He will recognize the prosecutor or defendant anytime it is in order; he will also recognize the jury if it so desired to question the defendant also. The judge may also question the defendant at any time. It is the judge's duty to recommend either leniency or punishment for the defendant, to the jury, but never in front of the defendant. In case of a minor complaint, the judge may pronounce judgment without the jury's verdict. The judge will always pronounce the verdict, and will also see that the sentence is carried out by the defendant.

VIOLATIONS

Parking and Automobiles

(1) Parking on roads or any other unauthorized area—Fifty cents ($ .50) fine.

(2) If fee is not paid, it shall be recommended to the administration that the offending student should lose the privilege of keeping an auto on campus.

(3) Speeding and reckless driving: On first offense a fifty cent ($.50) fine will be charged to the offender. Other offenses shall result in the removal of the auto from the campus.

Dining Hall Conduct

(1) Any offense will result in court court case; upon persistent offense by any one student, the council will recommend the loss of dining hall privileges.

Dormitory Conditions and Conduct

(1) Any offense will result in a case. Persistent violators will be dealt with severely.

Special Cases

(1) Persistent violators will be put on Student Council Probation.

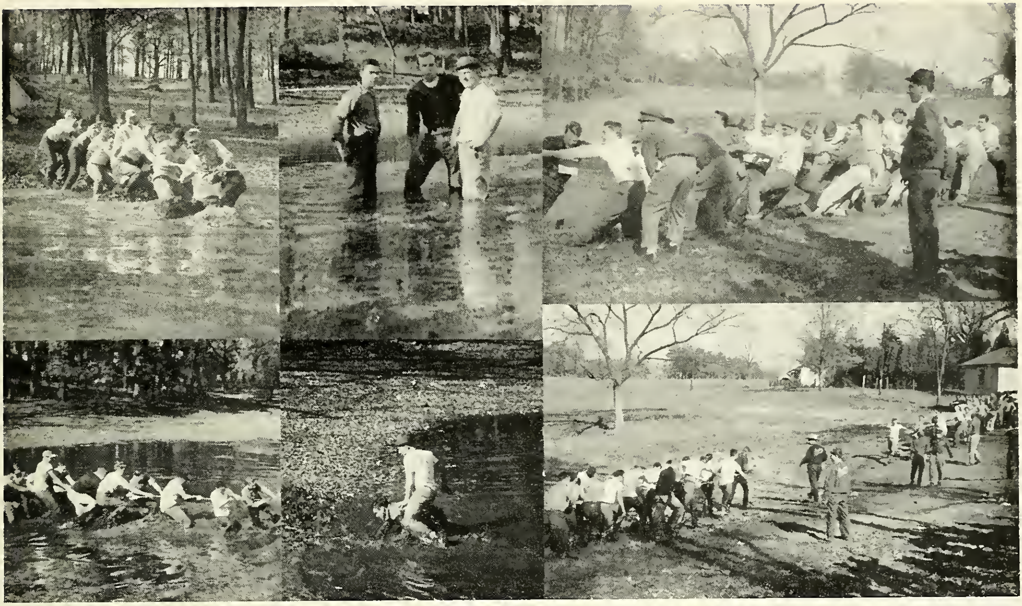
(2) If violations occur after the student is placed on Student Probation, College Probation will be recommended.

Administration

(1) In case of a complaint from the administration, the complaint will be in written form and given to any member of the council.

(2) Notification of action taken upon the complaint will be forwarded to the administration by the Council Secretary.

Freshmen Drown Sophomores . . . End Hazing!



Top pictures: left, Sophomore Class seems to be having a difficult time; center, "Ott" Collings, Tug of War Umpire, instructing George Weaver, president of the Sophomore Class, and Harry Weber, Frosh prexy, in the rules and regulations concerning contest; right, Referee Jim Lipori watches Freshmen as they go into their "Big Lean."

Lower pictures: left, Here we see the Sophs being pulled through the pond; center, Free ride for winning president; right, The victorious Freshmen are wildly congratulating each other.

THE PARROT'S CAGE

By L. J. '54

The Glee Club's really holding those high notes this year. Guess Skip Wisser forgot to bring enough pills.

Bert Litoff is very indignant about the way everyone says he smashed his car. He just had a small argument with a traffic island, that's all.

So the Sophomores got wet. The Junior class' collective heart really bleeds for you, believe me.

The secret of the Chef's success is his adherence to his principle: When it's smoking, it's cooking, when it's burning, it's done.

We hear the "Gold-dust" twins (Krusch and Aiello) have reformed. Anyone care to believe this?

Who's the junior who can't find his room? Must have been in the ring too often.

From the smell pervading the night air, Jim Orem & Co. must be deadly with a bow and arrow.

It seems that Bill (I must have a date, I'm a senior) Branigan has a new flame at Norristown. What's her name, Gash?

The canteen is under new management this year. Count your change, boys!

Steve Ferdo, our offensive center, appeared through the courtesy of Mrs. Ferdo. Thank you, Ma'm.

Arthur Poley wishes to announce his engagement. About time you did something for that girl, Reds. (Nice girl, too—Ed.)

To Stan Perelman and Doc Holloran: Did those pigs ever farrow?

When asked "How's the Boy?" Mr. Fiesser replied, "Which one? I have two."

Speaking of boys, What in heck did Chis (How is the Boy) Lipari do to his fenders. All four of them, I mean.

Prominent Economist predicts a recession for next year. Several of the boys have their apple pushcarts and pencil rolls ready.

John (Crankshaft) Soards thinks its all a big mistake! At 7:00 a.m. many people agree with him.

Mike Aiello looks tired these days. Every Monday afternoon he can be seen leaning on a leveling rod.

What is it that keeps the poultry majors in the poultry lab so long. Must have something real interesting up there.

Charlie Lorenz has sworn off intoxicating beverages and cigaretes. Next thing you know he'll swear off women. How about that, Charley?

Are your windows nailed shut, Freed, or are you afraid of fresh air?

Why are the boys in room 302 advertising for a barrel? Must be to keep water in (or something).

FOOTBALL SCENE

By Don Peters '53

N. A. C. FOOTBALL BANQUET

The Alumni-sponsored Football Banquet, which was held at Shoyer's Restaurant, Philadelphia, on December second, was a great success. After a delicious roast beef dinner, the banquet was highlighted with interesting (and occasionally humorous) speeches by toastmaster, Jesse Elson, and Athletic Director, Peter Glick, Jr., after which the guest speaker, Steve Allison (who incidently has a radio show on WPEN every night), gave an excellent talk on affairs of current interest but had to hurry off to WPEN before the banquet was over.

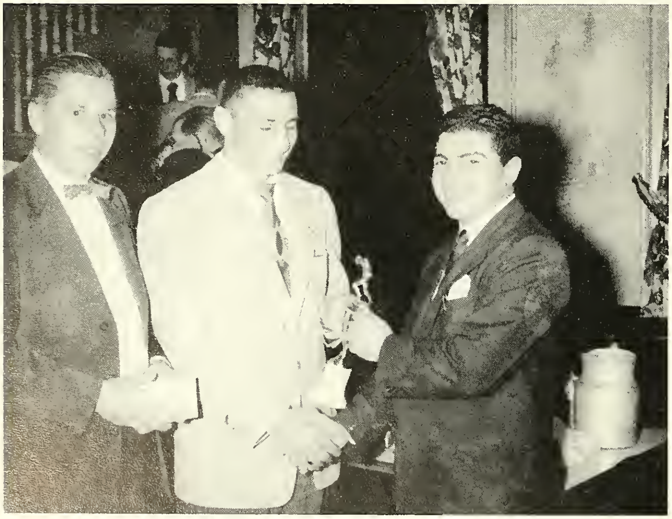
Following this, Coach Charles Keys presented football awards and trophies to members of the squad, elaboration on the individual merits of each player. Silver footballs were awarded to the following men:

Danny Franchetti
Ed Fleming
Ed Nieznay
Bill Branigan
Ivar Holmberg
Chuck Dahlstrom
John Giusti
Jim Lipari
Don Peters
John Soards
Stewart Berkis
Harry Conover
Ed Jardel
Ronnie Stammel
Sebastian Esgro
William Miller
Ray Bonowski
Howard Osborn
Art Collings
Steve Ferdo
Harry Weber
Herb Sitrin

John Giusti was awarded the gold trophy as the outstanding back of the year; Danny Franchetti a special alumni trophy for greatest ground coverage with a seven yard average; and William Branigan was awarded the outstanding lineman trophy.

The team itself surprised the Coach with the presentation of a Zenith portable radio.

Presentation of Awards



Last year's head manager (now an alumnus) Frank LaRosa, presents fullback John Giusti with the outstanding back award. Watching the presentation is head manager Clarence Okerlund.

Tribute to the Team

On behalf of the Alumni Association I wish to congratulate Coach Keys and the 1952 football team upon the steady improvement of play throughout the season. In these days of big-time college football with their teams composed of specialists of professional calibre, it is good to be the alumnus of a small college where football is still regarded as a sport, contributing to the development of character as well as the pleasure derived from the playing of the game itself. The young men on this squad are held high in the esteem of their schoolmates and of the alumni.

Many alumni have played on football teams of years past and we thrill vicariously every time our team runs out on the gridiron.

We have a community of interest with a warmth of spirit for these young men that no large college could engender, but which can best be expressed by simply stating that we are members of the N. A. C. Alumni Association.

Sidney Brunwasser '20, President
N. A. C. Alumni

ALL-OPPONENT TEAM

As the result of a poll taken of the varsity football players, we find that Susquehanna University placed the most men on the N. A. C. all opponent team, three. Two of these men were given great honors on last year's Little All American Team — Dick Young, halfback, for his running, kicking, and passing abilities and Bob Rising, end, for his pass receiving and defensive line play.

Wilson State Teachers, Gualdett Teachers, and Montclair State Teachers each placed two men on the squad. Brooklyn College and Trenton State Teachers each placed one man and Long Island Aggies failed to get a man on the squad.

The All Opponent Team

End	Rising	Susquehanna
End	Ward	Wilson
Tackle	Singleton	Gualdett
Tackle	Ramengal	Montclair
Guard	Regolphy	Montclair
Guard	Sazbo	Susquehanna
Center	Wallenstein	Brooklyn
Q'terback	Monaghan	Wilson
Halfback	Young	Susquehanna
Halfback	Thomas	Trenton
Fullback	Moers	Gualdett

BASKETBALL SCENE

By John Giusti '53

As the cheers and jeers of a victorious conclusion to the football season faded in the air, Coach Charlie Keys sent his invitation for tryouts on the basketball team.

Expecting a large turn out of newcomers and members of last year's squad, Coach Keys has arranged a considerably longer schedule this year. Under this new schedule, the opening date of our first game was moved up from January to December 4, 1952, thus making it necessary to start practice on the 17th of November.

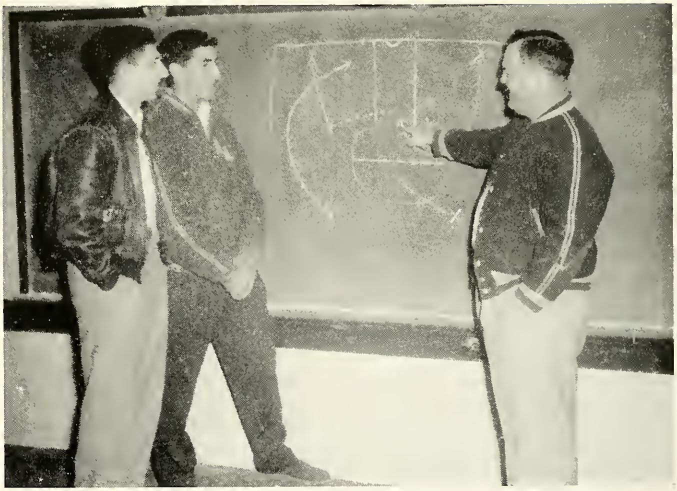
Thus far sixteen games have been scheduled for the season, beginning with Susquehanna University (Coached by Alonzo Stagg, Jr.), on December 4th at Selinsgrove, Pennsylvania.

Forming the nucleus of this year's squad are six returning lettermen from last year, along with numerous men from the freshman team.

Heading the list of returning lettermen this year is Jim "Chidsy" Lipari, who last year had a brilliant season, leading the team to a 6-10 record. Playing forward most of the year and switching to guard for the last few games, "Chidsy" led the team in scoring with 327 points for the year, for an average of a little better than 20 points per game. Jim's single high game in league competition was 33 points, plus a 45 in a post season game. Besides being high scorer, he was a fighter, and captured many rebounds off the boards.

Next we have a boy who was one of the play-makers of the team until a serious ankle injury forced him to the bench for the remainder of the season, Calvin Kidder. Fast on his feet and a magnificent ball handler, he also has a very fine one-hand shot from almost any angle on the court, and this specialty, along with his set shots, gave him his share of the scoring. Still in doubt over his ankle condition, we are all hoping that Cal's ankle has healed up sufficiently to let him play throughout the entire season.

Along with Cal we have the other play-maker of the team in Hal Tannin, a junior with still another year of basketball ahead of him after this season. Last year Hal had a tough job keeping the team going after the loss of his side-kick, Cal, and he performed this task better than anyone could have expected. In addition to being the best ball handler and dribbler on the team, Hal is a dead-eye on quick set shots, and a whiz on hook shots. If he would shoot more often we know he would be one of the leading scorers on the squad.



Coach Charlie Keys showing Harold Tannin and James "Chidsy" Lipari another offensive play.

Also returning is our tall lanky pivot man—Ed Vansant. As a freshman, "Big Ed" looked like anything but a college basketball player, but being a good pupil, he picked up the know-how fast, and before the year was over, he was playing varsity ball. Last year Ed developed into one of the best centers in our league, was our rebound man and continuously fed other members of the team. He has perfected a one hand pivot shot all his own and should he decide to start shooting more often, then opposition, beware.

The next two men are former members of the great "Fouling Five" team of intramural fame. These two boys had to be asked to try out for the team and

(Continued on page 20)

Aggies Drop First Three Basketball Games

By Don Peters '53

The Aggies traveled to Susquehanna University at Selinsgrove, Pennsylvania, to drop their opening basketball game of the new season by a 70 to 50 count. It was a smooth working Susquehanna quintet, studded with classy players whose shooting average was well above 75%, that defeated the Green and Gold.

The Aggies were strong, but could not overcome the Selinsgrove lads' ability for hitting the cords from the outside. The first quarter saw the home team lads build up a 22-8 lead and by half time they were out in front 45 to 20.

In the second half the Aggies actually outscored, outfought, and out-played the Susquehanna quintet but they could not overcome the big lead that they had. It was clearly demonstrated that the N. A. C. combination has what it takes but needs a little more perfection.

From the field Susquehanna outshot the Aggies 27 buckets to 14, and in foul goals Susquehanna centered 16 out of 21, while the Aggies made good on 22 out of 33 points. Hal Tannin led the

N. A. C. lads with 17 points while Jim Lipari had only 10 points.

Score by periods:	1	2	3	4
Susquehanna . . .	22	45	55	70
N. A. C.	8	20	31	50

Montclair Teachers Beat Aggies

The N. A. C. quintet opened its home season by losing to Montclair State Teachers College of New Jersey by a 78-56 count. Chizy Lipari came into his own and hit the hoops for 21 points but this wasn't enough to win. The teachers had one of the finest and classiest teams of all the small colleges in the east.

The teachers went into the lead early in the first quarter and never relinquished it. Chizy Lipari was hot on his self-perfected jump shot from the center of the foul circle, but for every basket or two the N. A. C. combination made the Jersey lads made two or three. Hal Tannin dropped three beautiful set shots from mid court to give the fans something to talk about. Hal also had four foul shots for a total of 10 points.

The loss to Montclair was the second straight for the Aggies, who have the toughest schedule by far in the history of the college.

The win for Montclair gave them a 3-0 record.

Score by periods:	1	2	3	4
Montclair	25	45	64	78
N. A. C.	12	28	38	56

King College Hands Aggies Third Loss

The Aggie five traveled to Kings College, Delaware, to lose their third straight game by a 70-68 count. It was the closest game of the season and was a neck and neck battle.

Big Ed Vansant dropped the first basket of the game and put the Aggies in the lead. But this lead changed hands numerous times in the first half with the Aggies coming out on top at half time. Chizy Lipari made excellent use of his jump shot to keep the Green and Gold in the game.

The third quarter turned into what seemed to be one of our own intramural games with N. A. C. having all the fouls called on them and the Kings quintet getting away with murder. Kings built up a nine point lead at this time and the N. A. C. five could never overcome this lead. It was a very poorly refereed game.

In the fourth quarter, and leading by two big points, Kings College five froze the ball. Twice Hal Tannin stole it and dribbled down the long, new court; twice he was fouled trying to shoot and neither time was it called. Thus the game ended 70-68 with Kings College coming out on top and also breaking a four-game losing streak.

Four men from N. A. C. squad hit double figures: Lipari with 19 points, Kidder with 13, Vansant with 10, and Tannin with 18.

Up to now Lipari has averaged 16.6 points a game and Tannin has averaged 15.

BASKETBALL SCENE

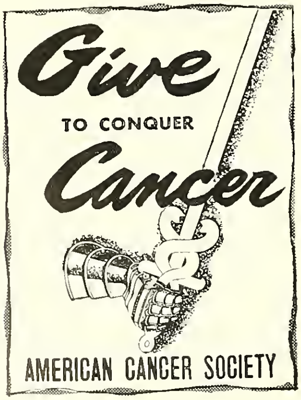
(Continued from page 19)

both earned their letters in their first year of varsity competition.

The first one is Don Peters, who never played ball in high school. Pete was more surprised than anyone at the tremendous amount of ability he had. Although he did not see too much action last year, he is expected to be of great value to this year's quintet.

The other boy is Eddie Fleming, who, like Peters, had to be talked into playing varsity ball. All of you remember the Kings College game in which Ed overcame a one-point lead to win for N.A.C. Ed did it with what was probably the most exciting play of the game, a one-hand push shot from deep in the corner of the floor. What more can be said except that the "Fouling Fives'" loss is the varsity's gain?

With these returning lettermen and newcomers, Coach Keys hopes to have a successful season, so let's give them the support of the entire student body.



THE NEW SNUFFY

Harold Osborne, Snuffy, and Sylvio Caro, Snuffy's caretaker.

With the death of Snuffy, the college mascot, N.A.C. was short one English bulldog. Thanks to the generosity of Harold Osborne '56, National Agricultural College now has another Snuffy.

This new mascot, though smaller in stature than the late Snuffy, is just as friendly and likeable.

Snuffy, along with his donator, comes from Millville, N. J. There is only one thing wrong with the animal — his heart.

(Ed. Note—Shortly after this was written Snuffy was taken away because of his bad health.)

Summer on a Farm

As I look back upon the summer I spent working on a Vermont farm, these are the thoughts that run through my mind:

My most vivid memories are of no person; they are of the land.

I remember trodding the fields of sweet smelling clover while the sun beat down upon me;

I remember the sweat streaming from every pore of my body as I strained to clear a field of baled hay;

I remember the song of a bee as I twisted my way through the swamp;

I remember the sweet, perfume-like odor of the fields during a light rain;

I remember the unequaled beauty of the countryside;

I remember the feeling of relief as the waters of Lake St. Catharine closed above my head after a hard day's work.

Howard Todd Gordon '56

The Alumni Gleanings

From the College Files

By Morton Hershman '54

From one of the filing cabinets in the dark recesses of the Alumni Office I found a folder entitled "Alumni Records." Here were forms sent in by the most recent graduation of the college, containing the news of their business activities and plans for the future. Many alumni, new and old, as well as the students here at the college should be interested in these reports not only from the standpoint of hearing from old friends, but to get an idea of what our graduates in general are doing since their graduation. This will be the first part of a two part series.

PART I

HERBERT S. AKERS, JR. Herb studied Animal Husbandry during his four years at N.A.C., and then took two one week courses in nutrition at Harrisburg, Pennsylvania, and Detroit, Michigan. He is now a salesman with a sales area covering three states. Herb hopes some day to establish his own enterprise in wholesale and retail sales.

STANLEY E. BARBER—Graduated as an Ornamental Horticulture major in '52. Stan is now a "Topographic Draftsman" for the state of Pennsylvania in an area covering both sides of the Schuylkill River from the head waters to the Fairmount Dam.

LEONARD E. CROOKE — Leonard is now managing a pure bred Ayrshire Herd in Riegelsville, Pennsylvania. He was graduated in 1951 with a degree in Dairy Husbandry and now plans to attend the Graham School of Scientific Breeding.

ALBERT DARPINO—"Al" received his degree in Agronomy in 1952. He is now a supervisor for the Seabrook Farming Corp., where he expects a promotion by January 1st, 1953.

JOSEPH EAGLE—Joe was a Horticultural major and was graduated in 1951. He writes, "I have a standing offer of a job with the Israel Fruit Growers Association in Tel Aviv and hope to be able to accept it within a year."

At the present time, Joe is a Fruit and Vegetable Inspector for the Railroad Perishable Inspection Agency.

IRWIN B. FRIEDMAN — Irwin graduated with a degree in Poultry Husbandry in 1952. He is now employed as a Research Assistant in Middletown, New Jersey. He is also a part time poultry farmer.

Irwin hopes, some day, to be a full time poultry farmer, and later, a breeder and hatcheryman.

ROGER MOWICE GABLE — An Ornamental Horticulture major graduating in 1951, Roger is an assistant grower for the Pinchbeck Bros., Inc., in Ridgefield, Connecticut. He is now looking for land in that area so that he may start a small business of his own.

GEORGE N. BLEIBTREU—George was graduated in 1952 with a degree in Animal Husbandry. He is now a Veterinary student at Zürich University in Zürich, Switzerland.

WALTER RUBIN—"Walt" started working for the U. S. D. A. as a poultry inspector. He studied poultry husbandry and was graduated in May, 1952. He is now in the Armed Forces, but will go back to the same position after his tour of duty.

PETER G. ROLLAND—Was graduated in 1952 as an Ornamental Horticulture major. Pete is a student at the Graduate School of Design, Harvard University.

WILLIAM G. SLEMMER—Bill, an Animal Husbandry major, was graduated in 1952. As a field representative for the Campbell Soup Company. Bill's job is to advise growers on the use of fertilizers, sprays, and rotations. In spite of this fine job, Bill still entertains hopes of getting into the livestock end of agriculture.

BRUCE M. SMITH—After graduating in 1951 with a degree in Dairy Science, Bruce went into a more unique profession. He is now working as a beekeeper. Bruce seems to enjoy this work and would like to own his own apiary.

JOHN H. TOOR—A poultry farmer with an Animal Husbandry background. John graduated in 1952 with a degree in Animal Husbandry, and is now in partnership with his father on a 10,000 layer poultry enterprise.

ROBERT G. WEBER—Bob is now foreman of his own business in which he does general landscaping, property, maintenance, and tree surgery. Bob studied Ornamental Horticulture here at the college and was graduated in 1952.

IRWIN RECHT—Now a grain inspector supervisor for the U. S. D. A., Grain Branch, Irwin really put to use the knowledge he acquired as an Agronomy major. He writes that his job offers an excellent opportunity for anyone interested in such work and would gladly send any information requested.

RICHARD D. ILSEMAN—Dick, a member of the class of 1952, is a grower of Chrysanthemums for Sweet Birch Farm in Kennett Square, Pennsylvania.

OSKAR H. LARSSON, JR.—Oskar hopes some day to work for his Masters Degree in Dairy Husbandry. He was graduated from N. A. C. in 1952 and is now working as a farm manager of an eighty head dairy herd.

WALLACE HEITSMITH—"Wally," graduated in 1952 as an Animal Husbandry major, is working for Armour and Company as a Junior Salesman. This is part of Armour's training program. Wally hopes to work his way up in the Company.

CARL F. LEUTNER—Assistant to Vice-President, Carl F. Leutner was graduated with a degree in Ornamental Horticulture in 1952. He holds this position with the Maloney Brothers Nursery Company, Inc. Carl expects, and is preparing to become, a company officer.

HERBERT EVAN REBACK—After graduating in 1951, Herb took a two-week course in Floral Design. He is now the owner and operator of a greenhouse and flower shop. Herb received his degree in Ornamental Horticulture.

VICTOR E. PESSANO, JR.—"Vic" majored in Food Industry while at N. A. C. and was graduated in 1951. He is now a salestrainer working for Swift and Company in the Philadelphia area.

DAVID R. MORTON—Agronomy major, class of 1951. Dave is a representative of General Mills, Larro Division. His job is to keep in contact with the feed dealers throughout Eastern Pennsylvania.

Deserving Honors

By Ronald Bronswieg '54

On October 13th, 1952 James A. Sheaffer became Assistant Dean of Students of the National Agricultural College.

Our new Assistant Dean was born in Philadelphia, "The City of Brotherly Love". He lived there for five years and moved to Springfield, Pennsylvania, in 1930.

While attending Springfield High School in Delaware County, Mr. Sheaffer was a member of the stage crew and played on the school's football team. In his spare time, he was very active in the Boy Scouts.

Upon his eighteenth birthday be enlisted in the armed forces and was sent to Camp McCall, North Carolina. He was a member of the 17th Airborne Division, attached to the 680th Glider Field Artillery Battalion. He served as a radio operator and surveyor for fire direction center.

James A. Sheaffer

Jim was then sent to the auxiliary parachute school, Camp Forrest, Tennessee, where he graduated after completing five jumps. Upon finishing his training he was shipped overseas. Jim saw action in France, Germany, and Belgium. He participated in two major battles, the airborne crossing of the Rhine River and the Battle of the Bulge.

Jim returned from overseas on January 16th, 1948. Still undecided as to what to do, he took a job in the Ledger Building in Philadelphia, Pennsylvania. About five months later while reading a newspaper, he came across an advertisement of our college. He was deeply interested in the advertisement because he had always had an interest in agriculture. His parents also encouraged him (his father came from a farm in Shippensburg, Pennsylvania, and his mother from a farm in South Jersey).

He contacted the college and was interviewed by Dr. Bowen. James Sheaffer entered with the class of '50 in June 1946, never dreaming that one day he would become assistant dean of students of this college.

Mr. Sheaffer was very active during his stay at the college. He was a member of the Horticultural Club and Varsity Club. Jim also played three years of football for N.A.C. On "A" Day Jim prepared a beekeeping exhibit with the help of another alumnus, Bob Holland, who graduated last year.

Jim majored in Agricultural Education but due to the dropping of degrees in that course, he changed his major to Agronomy. Jim was president of the senior class and was graduated in June 1950.

Upon leaving school, Jim took his first job at Campbell Soup Company, Camden, New Jersey, but left after 6 months to work for HyCross Hatcheries in Doylestown, Pa.

While working with the Hycross Hatcheries, Jim began raising chickens of his own. He bought extras from the hatchery and neighboring farms and soon had to rent a poultry house in Spring Valley. Jim now has a flock of a thousand birds and really enjoys taking care of them.

Jim thinks he has really found himself now and is endeavoring to help the students to the best of his ability. We of the *Gleaner* feel that Jim has already made great strides in helping to aid the student body, and we wish him all the success in the world.

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